**Potential Engineering Task Criteria**

Use this set to build a rubric or scoring guide for your Engineering Task. The list contains a range of statements from the discrete to complex.

**REMINDER:** Do NOT try to use all of these statements!

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| **Criteria** | **Notes** |
| **A. Define & Delimit Problem** |  |
| States a problem |  |
| Use prior knowledge to describe problems that can be solved |  |
| Define a simple design problem that can be solved through the development of an object, tool, process, or system and includes several criteria for success and constraints on materials, time, or cost |  |
| Specifies the constraints that a possible solution must meet |  |
| Precisely specify criteria and constraints of successful solutions |  |
| **B. Develop Solutions** |  |
| Research solutions |  |
| Brainstorm/explore multiple solutions |  |
| Apply scientific ideas to solve design problems |  |
| Use systematic methods to compare different solutions to see which best meet criteria and constraints |  |
| Creates a legible plan, model, diagram, description of solution |  |
| Generate and compare multiple solutions to a problem based on how well they meet the criteria and constraints of the design solution |  |
| Develop a model using an analogy, example, or abstract  representation to describe a design solution |  |
| **C. Optimize Solutions** |  |
| Test solutions |  |
| Make observations and/or measurements to produce data to test a design solution |  |
| Revise solutions |  |
| Displays stamina in revising solutions several times |  |
| Test two different models of the same proposed object, tool, or process to determine which better meets criteria for success |  |
| Analyze data to refine a problem statement or the design of a proposed object, tool, or process |  |
| Use data to evaluate and refine design solution. |  |
| Make a claim about the merit of a solution to a problem by citing relevant evidence about how it meets the criteria and constraints of the problem |  |
| Engages in argument to successfully to identify the best solution to a design problem |  |
| Can redefine the problem or generate new solutions to replace an idea that just isn’t working out |  |
| Arrives at an optimal design |  |
| **D. Overall Practices** |  |
| Collaborates effectively during Engineering Design process |  |
| Obtain and combine information from books and/or other reliable media to explain phenomena or solutions to a design problem |  |
| Communicate scientific and/or technical information orally and/or in written formats, including various forms of media as well as tables, diagrams, and charts. |  |